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EXAMINER

WONG, WARNER

ART UNIT PAPER NUMBER

2616

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/083,662	Applicant(s) NAKAGAWA ET AL.	
	Examiner Warner Wong	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-10, 15-21, 24, 25 and 28-35 is/are rejected.
- 7) ☒ Claim(s) 6, 11-14, 22, 23, 26 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. The following claims are objected to because of the following informalities:

(a) Claim 19: the limitation "a receiving machines" should be grammatically corrected as "a receiving machine".

(a) Claim 24: the claim comprises the limitation "capable of". Such language suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. See MPEP 2111.04.

(b) Claim 29, 31 & 33-35: Each claim comprises the limitation "can". Such language suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. See MPEP 2111.04.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 4, 8 and 28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barton (WO 00/59223) in view of Vogl (US 6,959,327).

Regarding claim 1, Barton describes a transmitting apparatus comprising:

a database part holding storage management information containing classification numbers and a maximum size of each of the classification numbers, and contents data wherein the classification numbers are data for managing storage areas of said receiving machines and are used to classify the contents data (fig. 1-2, the central site with database 100 (database part) containing objects with attributes (content data));

a schedule management part for scheduling the distribution of data (fig. 1, at the central site, the collection 104, analysis 102 and slicing 102 of program data (schedule management part) for distribution).

a transmitting part for transmitting data (fig. 1, transmission 103 for broadcast of program data);

a communication part communicating data, (fig. 1, collection 104 using phone/cable/internet means).

wherein, according to a schedule decided by said schedule management part, contents data provided with classification numbers and identification numbers for identifying the contents data, and storage management information are distributed to said receiving machines (fig. 2 & p. 7-8, objects (contents data) with attributes (classification numbers) and object ID (identification numbers) for identifying the objects, storage (type) management information which is distributed to clients (receiving machines)).

At the client devices (receiving machines), Barton also describes a storage management part for managing a storage area of client devices, but fails to describe:

- (a) the storage management part is located at the transmitting apparatus,
- (b) information containing classification numbers and a maximum size of each of the classification numbers, wherein the classification numbers are data for managing storage areas of said receiving machines and are used to classify the contents data (p. 7, object (information) containing attribute types (classification numbers) of either integer, string or Boolean (maximum length of such type), where attributes are used to decipher (classify) the object itself).

Barton describes that the storage management part is located at the receiving apparatus, but fails to describe that the storage management part is located at the transmitting apparatus (centralized site).

Vogl describes:

- (a) the storage management part is located at the transmitting apparatus (centralized site) (abstract, the server's transmission criteria are based on receiver's buffer).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to describe the above (a) limitations at the transmitting apparatus as per Vogl for the system of Barton.

The motivation for combining the teaching is that it provides a solution to apply scheduling or dispatching techniques to deal with priority information, QOS, buffer

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constraints, bandwidth constraints and information delivery during specific time intervals (Vogl, col. 2, lines 23-30).

Regarding claim 3, Barton fails to explicitly describe:

when changing the storage management information, said storage management part decides a distribution start date of the storage management information by a decided date when the storage management information is changed, and an operation value set said storage management part.

Vogl describes:

when changing the storage management information, said storage management part decides a distribution start date of the storage management information by a decided date when the storage management information is changed, and an operation value set said storage management part (col. 17, lines 40-49).

Regarding claim 4, Barton and Vogl combined describes all limitations of claim 1, that the storage management part resides in the data transmitting apparatus. Barton further describes:

when a receiving machine issues a request acquisition of the storage management information to said data transmitting apparatus, or when notified from a receiving machine that data overflowed, said storage management part detects that said receiving machine failed in acquiring the storage management information according to a predetermined schedule, and said storage management part creates a delete instruction specifying a list of contents data to be deleted in said receiving machine from a storage management information acquisition history, and said

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communication part distributes the delete instruction to said receiving machine (fig. 6-7 & p. 28-30, the Space Schedule 601 (storage management information) receives request acquisition from the user (receiving machine) and detects a shortage in space in storing the requested program, it will issue a cancel (delete) of an existing scheduled program to the receiving machine).

Regarding claim 8, Barton further describes:

said storage management part appends expiration dates the storage management information for distribution (p. 25, includes expiration time).

Regarding claim 28, Barton fails to explicitly describes:

said schedule management part provides a different reserve transmitting time zone than provided for contents data normally scheduled, and when becomes necessary to transmit contents data other than that normally scheduled, creates transmitting data in the reserve transmitting time zone, and said transmitting part transmits it.

Vogl describes:

said schedule management part provides a different reserve transmitting time zone than provided for contents data normally scheduled, and when becomes necessary to transmit contents data other than that normally scheduled, creates transmitting data in the reserve transmitting time zone, and said transmitting part transmits it (abstract & col. 15, lines 17-22, data is rescheduled for another time other than its original time for transmission).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to describe the rescheduling process at the transmitting apparatus as per Vogl for the system of Barton.

The motivation for combining the teaching is that it provides a solution to apply scheduling or dispatching techniques to deal with priority information, QOS, buffer constraints, bandwidth constraints and information delivery during specific time intervals (Vogl, col. 2, lines 23-30).

Regarding claim 29, Barton describes a data broadcast schedule system transmitting and receiving data transmission line, wherein:

a receiving machine of the data broadcast schedule system has a data allocation part for allocating a storage area of the receiving machine each of data to be received (fig. 1 & p. 28-30, client device allocates its database (storage area) for programs (data) received).

a data transmitting apparatus to transmit data to the receiving machine (fig. 1, central site 100)

Barton describes a schedule management part located at the receiver for making the recording (transmitting) schedule according to the result of a determining and increase in said storage area in said storage area (p. 28, line 30 – p. 30) of the receiving machine that can be allocated to each data, but fails to describe:

the data transmitting apparatus having the schedule management part.

Vogl describes:

the data transmitting apparatus having the schedule management part (fig. 1, scheduler process 128).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to describe the above (a) limitations at the transmitting apparatus as per Vogl for the system of Barton.

The motivation for combining the teaching is that it provides a solution to apply scheduling or dispatching techniques to deal with priority information, QOS, buffer constraints, bandwidth constraints and information delivery during specific time intervals (Vogl, col. 2, lines 23-30).

Regarding claim 30, Barton and Vogl describes all claim limitation set forth in claim 29, including schedule management part of the data transmitting apparatus making a transmitting schedule. Barton further describes:

The data broadcast schedule system according to claim 29 that transmits and receives data over a transmission line (fig. 1, transmission lines 104 & 109), and when predicted that arbitrary data being transmitted increases and other data being transmitted decreases, decreasingly transmits the other data for a while before increasingly transmitting the arbitrary data (fig. 6 & 7, p. 25, lines 14-20 and pp. 29 & 30, when viewer selects an (arbitrary) program to record at any time, the [aggregate] scheduler 601 & 602 determines (predicts) that this priority program download conflicts with another program (data) download, and cancels the other program download before recording the priority program).

Regarding claims 31 and 33-35, Barton describes a data broadcast schedule system/method/program/recording medium for transmitting and receiving data over a transmission line, wherein data transmitting apparatus that transmits data to a receiving machine to transmit and receive data, and scheduling (schedule management part) according to the result of predicting or determining an increase or decrease in the storage area of the receiving machine that can be allocated to each data (fig. 1 & p. 3, lines 14-31, a data storage management and scheduling system in which the central site (100, 110 & 111) (transmitting device) has a database 100 (recording medium) containing data for broadcast transmission, with preferred embodiment for TV & webpage program material, transmits data (109) & collects data (104) over a telephone or cable (transmission) line, wherein the client (receiving) device schedules the transmission according to the changing available storage space of the client (receiving) devices, p. 25, lines 14-20 & fig. 6 with its excerpt).

Barton fails to describe that the schedule (schedule management part) is at the central core site 100 (data transmitting apparatus) instead of at the client devices.

Vogl describes a schedule (schedule management part) being part of the central server (fig. 1, scheduler process 128 & 134 schedules designated transmission for the receiving & recording of client devices.).

It would have been obvious to one with ordinary skill in the art at the time of invention by application to specify that the scheduling process for data transmission to receiving & recording process of client devices be located at the central server(s) in a server-client environment.

The motivation for combining the teachings is that it provides an improved system and method for multiplexing, scheduling, dispatching and/or transmitting information with priorities over a network with constraints (Vogl, col. 2, lines 37-51).

Regarding claim 32, Barton describes that the schedule management part of the data transmitting apparatus makes transmitting schedule so that, when it predicted that arbitrary data being transmitted increases and other data being transmitted decreases, decreasingly transmits the other data for a while before increasingly transmitting the arbitrary data (fig. 6 & 7, p. 25, lines 14-20 and pp. 29 & 30, when viewer selects an (arbitrary) program to record at any time, the [aggregate] scheduler 601 & 602 determines (predicts) that this priority program download conflicts with another program (data) download, and cancels the other program download before recording the priority program).

3. Claims 2, 5, 9, 16-21 and 24-25 rejected under 35 U.S.C. 103(a) as being unpatentable over Barton in view of Call ((US 7,069,588).

Regarding claim 2, Barton describes a receiving machine comprising:

- receiving part for receiving contents data broadcast from data transmitting apparatus (fig. 1, client device receives broadcasted program (contents) data);
- communication part for acquiring data over a communication line (fig. 1, client device receives data over connection-based transmission);
- a storage area for storing (fig. 1, client database for storage);
- a data allocation part for allocating received contents data to said storage area,

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wherein said data allocation part updates storage management information in said storage area by storage management information acquired said communication part (fig. 6, p. 24, lines 31-35 & p. 28, lines 32-39, programs are allocated and managed at the client device's database storage by the individual sizes (storage management information) over the storage capacity).

Barton fails to describe:

said data allocation part stores contents data received by said receiving part said storage area only when determines that, even if the contents data were stored a total size of contents data of each classification number said storage area would not exceed a maximum size for each classification number contained in the storage management information in said storage area.

Call describes:

said data allocation part stores contents data received by said receiving part said storage area only when determines that, even if the contents data were stored a total size of contents data of each classification number said storage area would not exceed a maximum size for each classification number contained in the storage management information in said storage area (col. 5, lines 10-15, database cache classifier determines threshold (max size) for each incoming traffic classification and holds data if not exceeding threshold).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to describe using classification and a maximum size for incoming traffic data as in Call for the system of Barton.

The motivation for combining the teachings is that it prevents available resources for each traffic classification in a network node from being depleted (col. 2, lines 49-51).

Regarding claim 5, Barton further describes:

according to a list of contents data to be deleted, specified a delete instruction received over a communication line by said communication part, said allocation part deletes fields of applicable contents data from a contents and the contents data from said storage area (fig. 7 & p. 30, the schedules recording will be canceled upon receiving the delete command from transmitter's storage management information).

Regarding claim 9, Barton further describes:

the receiving machine including timer processing part for performing timer processing, wherein, when said communication part receives storage management information provided with expiration dates, said timer processing part updates storage management information held in said storage area by the expiration dates (p. 9, attribute "expiration" of date & time is evaluated).

Regarding claim 16, Barton and Call combined describes all limitation of claim 2, including maximum sizes of subareas of storage size.

Barton further describes:

the data allocation part holds a change history of subareas in which contents data was stored, or contents data size change history, whereby, if said data allocation part detects that storage of contents data received by said receiving part will cause a maximum size for each classification number to be exceeded, said data allocation part uses the contents data size change history to create a list of contents data to be

deleted, and deletes fields of applicable contents data from a contents list and the contents data from said storage area (fig. 6-7 & p. 28-30, the Space Schedule 601 (storage management information) holds all cached programs (change history of subareas of stored data), and if it detects a shortage in space in storing a new requested program, it will organize a scheduled (list of) existing programs for cancellation (deletion)).

Regarding claim 17, Barton further describes:

if said data allocation part detects that storage of contents data received by said receiving part will cause a maximum storage size of said storage area to be exceeded, said data allocation part deletes contents data from said database part according a deletion condition and deletes applicable fields from contents list (p. 29-31, the program (contents data) and its related objects & attributes are deleted from the client database according to user's program priorities (deletion condition)).

Regarding claim 18, Barton further describes:

the deletion condition is classification numbers or identification information appended to contents data (p. 31, lines 20-23, the deletion is based upon the priorities (classification numbers) set for each program (contents data)).

Regarding claim 19, Barton further describes:

said storage management part manages, for each receiving machine, a history when notified from said receiving machine that data overflowed, whereby the existence of a receiving machines with history information satisfying a given condition is detected and said communication part distributes an instruction to delete all contents data said

receiving machine (fig. 6 & p. 30, lines 36-38, each (all) existing programs may be cancelled (deleted) when the storage of the client device (receiving machine) is full).

Regarding claim 20, Barton and Call combined describes all limitation of claim 17, including maximum sizes of subareas of storage size. Barton further describes:

said data allocation part detects that storage of contents data received by said receiving part will cause a maximum size for each classification number to be exceeded, said storage area holds history information about overflow, whereby, when the history information satisfies a given condition, said data allocation part deletes all contents data from the storage area and deletes all fields from a contents list (fig. 6-7 & p. 24, 28-39, previous viewing (storage management information change) history and programs (contents data), with the Space Schedule 601 (storage management information) holding all cached programs (change history of subareas of stored data), and if it detects a shortage in space in storing a new requested program, each (all) existing programs may be cancelled (deleted) when the storage of the client device (receiving machine) is full).

Regarding claim 21, Barton and Call combined describes all limitations of claim 17. Barton further describes:

said data processing part holds a viewing history for each contents data in a storage area, whereby if said data allocation part detects that storage of contents data received by said receiving part will cause a maximum size of a storage area be exceeded, contents data having not been viewed for a longer period is deleted earlier (fig. 7, p. 28,

lines 32 to p. 29, line 18, older programs are cancelled (deleted) earlier than their expiration times, unless selected by the viewer as higher priority).

Regarding claim 24, Barton and Vogl combined describe all limitations set forth in claim 2, including (individual) maximum sizes of subareas of storage size. Barton further describes:

an input part capable of selecting contents data to be stored, wherein a selection type contents data maximum size is held in said storage area to store a maximum size of selection type contents data, whereby, when contents data selected in said input part received, said data allocation part checks the size of the received contents data and stores the received contents data in said storage area only when storage the contents data will not cause the selection type contents data maximum size held said storage area be exceeded (p. 30, user is prompted to add or not to record the new program should the storage becomes full with pre-recorded programs).

Regarding claim 25, Barton further describes:
when the data transmitting apparatus groups plural contents data and sets different receive conditions in each contents data within a group to transmit the contents data, said storage area holds attribute information specific to the receiving machine or users, said data processing part selects only contents data, of contents data within an identical group received by said receiving part, in which a receive condition matching attribute information held in said storage area is set, and said data allocation part stores only contents data selected by said data processing part in said storage area (p. 39, central site 100 (data transmitting apparatus) aggregates/groups objects of certain attributes

based on certain group of receivers' interests (conditions), and the client (receiving machine) may select programs (contents) data according to such interests (matching conditions)).

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barton in view of Call as applied to claim 2 above, and further in view of Goss (US 5,828,653).

Regarding claim 7, Barton further describes:

the receiving machine includes said storage area for holding a storage management information change history and contents data (p. 24, previous viewing (storage management information change) history and programs (contents data));

said data allocation part for managing a contents list, wherein, if said data allocation part detects that a total amount contents data exceeds a maximum size, depending on whether contents data received by said receiving part is stored or storage management information received by said communication part is updated, said data allocation part creates a list of causative contents data, and deletes fields of applicable contents data from the contents list and the contents data from said storage area (fig 6, p. 31, receiver's fuzzy recordings (data allocation part) detects total amount of program (contents data) exceeds a maximum size and engender a list of the conflicting programs for deletion).

Barton fails to explicitly describe:

the maximum size is for each classification number.

Goss describe that the there is a maximum size for each classification number (col. 2, lines 42-48, maximum threshold (size) queue for each QOS priority class (classification number).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to describe using individual queues of maximum size for each classification number QOS as in Goss for the combined method of Barton and Vogl.

The motivation for combining the teachings is that is provides different data cells to have different priorities which enables intelligent discard (col. 1, lines 59-62).

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barton in view of Vogl, and further in view of Call (US 7,069,588).

Regarding claim 10, Barton fails to describe:

a data input part for inputting contents data, wherein said database part holds a maximum size of each one or more subareas which a maximum storage size of a receiving machine is split and allocated, whereby, when contents data with a subarea specified is inputted from said data input part, said storage management part checks whether the size of the contents data does not exceed a maximum size of each subarea, and holds only contents data passing the checking in said database part.

Call describes:

a data input part for inputting contents data, wherein said database part holds a maximum size of each one or more subareas which a maximum storage size of a receiving machine is split and allocated, whereby, when contents data with a subarea

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specified is inputted from said data input part, said storage management part checks whether the size of the contents data does not exceed a maximum size of each subarea, and holds only contents data passing the checking in said database part (col. 5, lines 10-15, database cache classifier determines threshold (max size) for each incoming traffic classification and holds data if not exceeding threshold).

Allowable Subject Matter

6. Claims 6, 11-15, 22-23 and 26-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Leermakers (6,629,284), Birdwell (6,628,625), Okada (5,838,668), Sakata (US 2002/0041648), Enomoto (US 5,659,877), Gunaseelan (US 2002/0097750), Nakada (US 2002/157104) and Nabeshima (US 2002/0164947).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Warner Wong whose telephone number is 571-272-8197. The examiner can normally be reached on 6:30AM - 3:00PM, M-F.

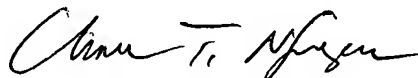
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Warner Wong
Examiner
Art Unit 2616

WW



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600